

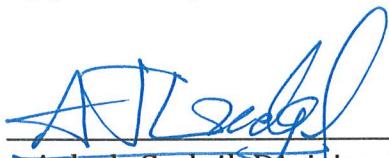
Environmental Energy Technologies Division

2014 Self-Assessment Project 1

A Self-Assessment of Personal Protective Equipment Use in Laboratory Areas

April 1, 2014

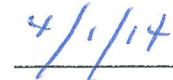
Approved by:



Ashok Gadgil, Division Director


Date

Ron Scholtz, EETD Safety Manager


Date

Introduction

Personal Protective Equipment (PPE) is used as a supplement to but not as a substitute for engineering controls for protection of personnel working in lab areas. PPE includes chemical resistant gloves, eyewear, footwear, lab coats, aprons, coveralls and respiratory protection. PPE may be used as a sole means of control if the use of other controls is not feasible. To be effective, employees must understand the proper selection, use and limitations of PPE. In addition, PPE must be readily accessible to personnel for use. It must be properly maintained and stored.

The EETD Safety Committee has selected use of personal protective equipment in laboratory areas as a self-assessment project. This is the first EETD self-assessment project for FY2014.

Requirements

Lab Personal Protective Equipment requirements are described in the following documents:

- LBNL PUB-3000, Health and Safety Manual, Chapter 19- Personal Protective Equipment”
- LBNL PUB-3000, Health and Safety Manual, Chapter 45- “Chemical Hygiene and Safety Plan”
 - See: Hazard Controls > Controls for Hazardous Materials > Personal Protective Equipment
- LBNL PUB-3000, Health and Safety Manual, Chapter 16- “Laser Safety”
- LBNL PUB-3000, Health and Safety Manual, Chapter 29- “Safe Handling of Cryogenic Liquids”
- LBNL PUB-3000, Health and Safety Manual, Chapter 39- “Noise Hazard Assessment and Control”
- LBNL PUB-3000, Health and Safety Manual, Chapter 44- “Respiratory Protection”
- EETD Integrated Safety Management (ISM) Plan- Section 5, “Roles and Responsibilities”

All EETD personnel are required to complete a Job Hazards Analysis (JHA) on an annual basis. A hazard questionnaire is completed that identifies various controls for the hazards identified. This includes use of PPE and associated training requirements. Personnel who handle hazardous materials are required to complete EHS0348 “Chemical Hygiene and Safety” training. This training course includes information on proper use of PPE when working with hazardous materials. Additional training is required for other types of hazards identified including: EHS0302 “Laser Safety”, EHS0310 “Respirator User”, EHS0311 “Dust Mask User”, and EHS0471 “Radiation Worker”.

All EETD personnel are required to maintain a safe work area, wear personal protective equipment when required, and report any safety issues immediately to their supervisor for follow-up and corrective action.

Methodology

The following methodology was used to conduct this personal protective equipment self-assessment:

1. The self-assessment team made observations in each lab. See Attachment 1 for the survey form used. The information collected included:
 - a. Types of laboratory lab coats being used
 - b. Types of protective gloves being used
 - c. Availability of PPE such as safety glasses
 - d. Condition of PPE in use
 - e. Any other types of PPE being used such as respiratory protection, laser eyewear, hearing protection, etc.
 - f. Observe personnel working in area for proper use of PPE.
2. A PPE self-assessment survey was generated and distributed as an on-line "Google Survey" to all EETD lab area personnel. Lab personnel were identified by those assigned safety training courses in their Job Hazards Analysis such as: EHS0171 "Cryogen Safety", EHS0302 "Laser Safety", EHS0310 "Respirator Safety", EHS0311 "Dust Mask", EHS0348 "Chemical Hygiene and Safety", EHS0471 "Rad Worker", EHS0475 "X-Ray", and EHS0604 "Hazardous Waste Handler". In addition, a general announcement of the survey was communicated division-wide. See Attachment 3 for the survey form used. The 8 questions asked included:
 - a. *What types of PPE do you use on a regular basis? Check all that apply:*
 - Safety Glasses with Side Shields
 - Face Shield
 - Lab Coat
 - Chemical Gloves
 - Hot Gloves
 - Cryogen Gloves
 - Laser Glasses
 - Cartridge Respirator
 - Dust Mask
 - Hearing Protection
 - PPE is not needed in my work area
 - b. *How are you informed about what types of PPE are required in your area and how to properly use it? Check all that apply:*
 - On-Line Safety Training
 - Area Safety Lead
 - Supervisor
 - Principal Investigator
 - Co-Worker
 - Other: _____
 - c. *Who do you normally contact if you need PPE or have questions about the PPE you are using? Check all that apply:*
 - Area Safety Lead
 - Supervisor
 - Principal Investigator
 - Division Safety Coordinator
 - EHS Division

- Other:* _____
- d. Is required PPE made readily available to you in your work area?
- Yes- all PPE needed is made readily available
 - Sometimes- certain items are not always available
 - No- PPE is not made readily available
 - Other: _____
- e. How do you select the proper type of glove for chemical compatibility when working with hazardous materials? Check all that apply:
- Consult with Area Safety Lead
 - Consult with Supervisor/PI
 - Check the glove manufacturer compatibility chart
 - I use gloves made available in the work area
 - I do not know about glove compatibility determination
 - Other: _____
- f. Are there any airborne hazards in your work area that you feel requires the use of respiratory protection such as cartridge respirator or dust mask?
- No. No respiratory protection PPE is needed.
 - Yes. There is a need for respiratory protection such as respirator or dust mask.
 - Other: _____
- g. Are there any types of PPE not currently in use in your work area that would be beneficial for your safety?
- h. Do you have any other feedback regarding PPE use in your work area? Do you have any needs regarding PPE that could be better addressed?
3. A summary of the observations, noteworthy practices, and suggested improvements was compiled by the self-assessment team and presented in this report.
4. The following personnel participated on the self-assessment team:
- a. Ron Scholtz- EETD Safety Manager
 - b. Dan Best- EHS Division
5. The scope of this project applied to the following 36 EETD lab areas:
- a. Building 62 wet lab areas- 62-102, 62-220, 62-246, 62-308, 62-310, 62-312, 62-314, 62-316, 62-320, 62-342, 62-346, 62-350.
 - b. Building 70 wet lab areas- 70-103, 70-108, 70-123, 70-129, 70-157, 70-163, 70-173, 70-174, 70-201, 70-215, 70-217, 70-218, 70-223, 70-226, 70-249, 70-257, 70-263, 70-264, 70-269, 70-274, 70-275, 70-289, 70-295, 70-299.
6. The following were not included in the scope of this self-assessment:
- a. Non-EETD operated areas in Buildings 62 and 70 such as Facilities, Earth Sciences, and Materials Sciences.
 - b. Office and break areas
 - c. Off-site fieldwork locations.

Summary of Findings, Observations and Noteworthy Practices

The following is a summary of findings, observations, and noteworthy practices identified by the self-assessment team. Significant items identified in the findings section are each entered into the Corrective Action Tracking System "CATS" to ensure these are addressed and completion documented. Detailed survey results are found in Attachments 2 and 4. In addition, photographs of observations are presented in Attachment 5.

Findings:

1. Lab coats- It was observed that the majority of lab coats in use are of the polyester/cotton blend. These do not provide any flame resistance. Most EETD lab areas use flammable solvents and reactive metals. A more appropriate type of lab coat, such as flame retardant cotton, needs to be communicated and made available to workers in these areas. (CATS #9611- Items 1,2, and 3)
2. Chemical gloves- It was observed that nitrile exam gloves are almost exclusively used in all EETD lab areas. These do provide splash protection only for a variety of chemicals, but there should be a selection of other glove materials available to address hazards including some corrosive materials and certain types of solvents that are not as compatible with nitrile. (CATS #9612- Items 1 and 2)
3. Lack of PPE Use- It was observed in 70-269 that workers are not consistently wearing minimum PPE when working at the fume hood. The Principal Investigator was made aware of the issue. However, further follow-up is needed to ensure PPE issues are addressed on a consistent basis. (CATS #9613)

Survey Observations:

1. A total of 169 self-assessment survey requests were sent to EETD lab area personnel. Of these, 78 responses were received during the assessment period (46% completion rate). See Attachment 4 for survey data.
2. Survey Question 1: *What types of PPE do you use on a regular basis? (number of responses)*
 - Safety Glasses with Side shields- 71
 - Chemical Gloves- 54
 - Lab Coat- 44
 - Cryo Gloves- 14
 - Faceshield- 10
 - Hot Gloves- 10
 - PPE Not Needed- 7
 - Laser Glasses- 4
 - Hearing Protection- 4
 - Respiratory Protection- 3
3. Survey Question 2: *How are you informed about what types of PPE are required in your area and how to properly use it? (number of responses)*
 - On-Line Safety Training- 71
 - Supervisor- 42
 - Area Safety Lead-35
 - Co-Workers- 34

- Principal Investigator- 30
 - MSDS- 1
 - Previous Job- 1
 - Common Sense- 1
 - PUB-3000- 1
 - UC Campus- 1
4. Survey Question 3: *Whom do you normally contact if you need PPE or have questions regarding the PPE you are using? (number of responses)*
- Supervisor- 39
 - Area Safety Lead- 31
 - Division Safety Coordinator- 31
 - Principal Investigator- 23
 - EHS Division- 16
 - UC Campus- 1
 - VWR- 1
5. Survey Question 4: *Is required PPE made readily available to you in your work area? (number of responses)*
- Yes- 73
 - Sometimes- 4
 - No- 1
6. Survey Question 5: *How do you select the proper type of glove for chemical compatibility when working with hazardous materials? (number of responses)*
- Chemical Compatibility Chart- 47
 - Supervisor/Principal Investigator- 34
 - Area Safety Lead- 21
 - Use Gloves Available in Area- 19
 - Don't Use Chemical Gloves- 5
 - EHS/Safety- 2
 - I Don't Know- 1
 - PUB-3000- 1
7. Survey Question 6: *Are there any airborne hazards present in your work area that you feel requires the use of respiratory protection such as cartridge respirator or dust mask? (number of responses)*
- NO- 74
 - YES- 4 (all dust hazard concerns)
8. Survey Question 7: *Are there any other types of PPE not currently in use in your work area that could be beneficial for your safety?*
- 2 responses:
 - Safety shoes when moving gas cylinders
 - Cut resistant gloves
9. Survey Question 8: *Do you have any other feedback regarding PPE use in your work area? Do you have any needs regarding PPE that could be better addressed?*
- 1 response:
 - Lab coat laundry service

Lab Walkthrough Observations

1. All 36 EETD lab areas in Buildings 62 and 70 were visited by the self-assessment team. Observations were made and recorded. See Attachment 2.
2. Lab Coat Type
 - Polyester/Cotton Blend- 21 lab areas
 - 100% Cotton- 3 lab areas
 - Disposable Paper (Tyvek?)- 5 lab areas
 - Flame Resistant Cotton- 1 lab area
 - NOMEX- 1 lab area
 - None- 5
3. Chemical Gloves (some lab areas have more than 1 type)
 - Nitrile Exam- 31 lab areas
 - Heavy Butyl- 4 lab areas (used as glassware dip buckets)
 - Latex- 3 lab areas
 - N-Dex Nitrile (Thick)- 2 lab areas
4. Visitor Safety Glasses
 - Available- 29 lab areas
 - Not Available- 7 lab areas
5. Other PPE Noted (some lab areas have more than 1 type)
 - Cryo Gloves- 8 lab areas
 - Faceshield- 7 lab areas
 - Hot Gloves- 6 lab areas
 - Hearing Protection- 5 lab areas
 - Laser Eyewear- 4 lab areas
 - Dust Mask- 2 lab areas
 - Goggles- 1 lab area
 - Chemical Apron- 1 lab area
6. Door Placard PPE
 - All lab areas have door hazard placards with minimum PPE requirements noted.
 - The 4 areas that have laser safety glasses required should have noted on door placard
7. All PPE Available?
 - YES- 29
 - NO- 7 (primarily visitor safety glasses)
8. PPE Properly Stored?
 - Lab Coats Stored Outside Lab Area- 7 lab areas
 - Lack of Adequate Lab Coat Storage Space- 6 lab areas
 - PPE Stored Next to Chemicals- 1 lab area
9. PPE in Good Condition?
 - Deteriorated Gloves- 3 lab areas
 - Heavily Soiled Lab Coats- 3 lab areas
 - Hole in Hot Gloves- 2 lab areas
 - Scratched Laser Goggles- 1 (removed from area for disposal)
10. PPE Being Worn?

- YES- 35
- NO- 1 (observed working at hood without lab coat or proper safety glasses)

Noteworthy Practices:

1. Excellent example of effective lab coat storage rack in 70-123.
2. Use of n-Dex thick nitrile gloves in 62-342. Added protection from chemical permeation.
3. Use of Nomex flame resistant lab coats in the 70-173 Combustion Research Lab.
4. Good organization of different types of laser glasses in both 70-157 and 70-173.

Conclusions and Future Improvements

Conclusions

The following conclusions summarize the results of the EETD Personal Protective Equipment self-assessment project:

1. Worker survey results indicate that required PPE is made readily available to them and very few concerns were noted in regards to additional PPE needs.
2. Worker survey results indicate there is a good deal of variability of who informs them of PPE requirements or whom they go to when they have questions about PPE.
3. Lab coats in use are mainly polyester/cotton material that offers no flame resistance when working with flammable solvents or reactive metals. In addition, many lab coats were found poorly stored and very dirty.
4. Chemical gloves used are almost exclusively nitrile exam gloves that provide splash protection only for a range of different hazardous materials.
5. Personal protective equipment used is primarily safety glasses with side shields, chemical gloves, and lab coats. Other types of PPE such as chemical aprons, arm guards, cut resistant gloves, face shields, etc. are not as readily available in the lab areas.

Recommendations and Suggested Future Improvements

The following recommendations and improvements should be made in order to enhance PPE use in EETD lab areas:

1. Focus is needed to address a number of lab coat issues. These include:
 - a. Ensure that lab coats with flame resistance are made available where hazards involving flammable solvents or reactive metals are present. At a minimum, 100% cotton/flame retardant material should be standardized in these areas (**Action:** S. Synarski and R. Scholtz are investigating options for either rental or purchase of lab coats that are standardized to cotton/flame retardant material).
 - b. Identify a lab coat cleaning service and make available to lab workers so that lab coats are better maintained (**Action:** S. Synarski obtaining quotes for lab coat cleaning service).
 - c. Improve lab coat storage in the lab areas. Remove old, damaged, or unused lab coats. Install lab coat wall hangers where needed to improve storage and access. The current coat hangers do not give enough storage capacity and limit access. (**Action:** R. Scholtz will identify options for wall hanger units and communicate to lab PI's for purchase/installation).

- d. Ensure that lab coat selection and maintenance is clearly communicated to workers. A Safety Alert has been distributed (**Completed**- See Attachment 6).
- 2. Communicate chemical glove selection, use, and limitations to workers. The glove compatibility charts currently available provide detailed information but may be too complicated for some users. A simple table with the main chemical hazards listed and recommended glove materials may be more useful. Examples from other laboratories and universities are available (**Action**: R. Scholtz will work with EHS Division Liaison to develop simple PPE table).
- 3. Other types of PPE such as cut resistant gloves when handling sharps and chemical aprons when working with larger volumes of corrosive materials should be considered by PI's made more available to workers (**Action**: R. Scholtz will provide Safety Alerts to PI's on types of PPE available. Lab supply list will be updated to include these types of items).
- 4. Continue to perform 'spot checks' of lab areas to ensure that minimum PPE is being worn by workers. Take corrective action through the PI when minimum PPE practices are not being followed (**Action**: PI's will perform checks during quarterly self-inspections, R. Scholtz will perform checks during quarterly SAA inspections, Division Management will perform checks during annual walkthroughs)
- 5. Update the door hazard placards for the 4 laser use labs in Building 70 and add laser safety glasses to the PPE requirements section (**Completed**).
- 6. The results of this self-assessment will be made available to EETD personnel so that they are aware of issues identified and future plans (**Completed**- Posted on EETD Safety website and announced in division communications).
- 7. A follow-up self-assessment should be performed in 2-3 years to determine if there have been any changes in personal protective equipment use in the lab areas. Focus should be geared towards specific types of PPE in use such as chemical gloves or lab coats.

ATTACHMENT 1
Lab Area Personal Protective Equipment Self Assessment Form

Lab Area:

Evaluated By: Evaluation Date:

Question	YES	NO	Comments
1. Are PPE requirements clearly identified on the lab area door placard?			
2. Is required PPE available in the lab area?			
3. Are personnel working in the lab area observed using required PPE?			
4. Are personnel working in the lab area properly wearing/using their PPE?			
5. Is PPE in the lab area maintained and in good condition?			
6. Is PPE in the lab area properly stored?			
7. Is the PPE used appropriate for the types of hazards observed?			
8. Are proper footwear and long pants being worn in chemical use areas?			

Protective Gloves Used (Brand/Type):

Lab Coats Used (Brand/Type):

Other PPE Types Observed in Use:

ATTACHMENT 2
Field Self Assessment Results

Lab Area	PI	Date	Lab Coat Type	Chemical Gloves	Visitor Safety Glasses	Other PPE Noted	Door Placard PPE OK?	All PPE Available?	PPE Properly Stored?	PPE in Good Condition?	PPE Being Worn?	Comments
70-103	H. Destaillats	2/21/14	Cloth 65% Dacron, 35% Cotton; Paper "Kleen Guard A60"	Purple Nitrile	OK		Yes	Yes	Yes	Yes	Yes	
70-108	R. Kostecki	1/24/14	Cloth 80% Polyester, 20% Cotton	Microflex Supernose Nitrile, Microflex Duraflock Natural Latex Rubber Latex	OK		Yes	Yes	Yes (see comment)	Yes (see comment)	Yes	Lack of storage for lab coats. Some are very soiled.
70-123	N. Balsara	1/24/14	Cloth 100% Cotton	Microflex Supernose Nitrile	OK	Dust Masks*	Yes	Yes	Yes	Yes	Yes	Hooks mounted on wall for easy storage of lab coats- Best Practice
70-129	R. Melhorn	2/21/14					Yes	Yes	Yes	Yes	Yes	
70-157	R. Russo	2/21/14	Cloth- "USA Fabric" 80% Polyester	VWR Nitrile exam gloves	OK	Ear plugs	Laser Lab- Add laser glasses	Yes	Yes	Yes	Yes	Laser glasses stored in separate box with wavelength ID
70-163	V. Zirnfa	2/14/14	Paper lab coats	VWR Nitrile exam gloves	OK	N95 Dust Masks*; laser glasses stored in box w/ID; cryo gloves, ear plugs	Laser Lab- Add laser glasses	Yes	Yes	Yes (see comment)	Yes	Found scratched laser goggles in storage box. Removed from area for disposal.
70-173	R. Cheng	1/24/14	Cloth 100% Cotton Flame Resistant	Microflex Nitrile, Microflex Supreno SE	OK	Noise Protection- Add		Yes	Yes	Yes	Yes	Laser eyewear stored in cabinets by type- Best Practice
70-174	R. Kostecki	2/14/14	Cloth 65% Polyester 35% Cotton	Purple Nitrile	OK	Laser glasses, cryo gloves, faceshield	Laser Lab- Add laser glasses	Yes	Yes	Yes	Yes	

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Personal Protective Equipment Self-Assessment

Lab Area	PI	Date	Lab Coat Type	Chemical Gloves	Visitor Safety Glasses	Other PPE Noted	Door Placard PPE OK?	All PPE Available?	PPE Properly Stored?	PPE in Good Condition?	PPE Being Worn?	Comments
70-201	L. Gundel	2/14/14	Cloth- 65% Polyester/35% Cotton	VWR Microgrip Purple Nitrile; Butyl gloves at clip bucket	No		Yes	No- Safety Glasses	Yes	Yes	Yes	Dip bucket gloves old (>penetration rate?)
70-215	T. Kirchstetter	2/14/14	Cloth- 65% Polyester/35% Cotton	VWR Purple Microgrip Nitrile	OK	Hot gloves, cryo gloves, faceshield	Yes	Yes	Yes	Yes	Yes	
70-217	L. Gundel	2/14/14		Microflex Freeform SE Nitrile	OK	Goggles	Yes	Yes	Yes	Yes	Yes	
70-218	V. Battaglia	2/14/14	No lab coats observed	VWR Nitrile exam gloves	No	Hot Glove (Single, not paired)	Yes	No- Safety glasses, lab coats, single hot glove	Yes	Yes	Yes	
70-223	R. Maddalena	2/13/14	Cloth- 80% Polyester/20% Cotton	VWR Microgrip Purple Nitrile	OK	Cryo gloves, faceshield	Yes	Yes	Yes	Yes	Yes	
70-226	G. Liu	2/13/14	Paper- Alpha ProTech; Cloth- 65% Polyester/35% Cotton	VWR Nitrile exam gloves, Butyl gloves at clip bucket	No	Faceshield, hot gloves	Yes	No- Safety Glasses	Yes	Yes (see comment)	Yes	Cryo tank in room but unable to locate cryo gloves; Dip bucket gloves old (>penetration rate?)
70-249	Name	2/14/14	Paper lab coats	VWR Nitrile, Certi Clean 10 Nitrile	OK		Yes	Yes	Yes	Yes	Yes	
70-257	A. Weber	2/14/14	Paper lab coats; Cloth (unknown material- Nylon?)	Midnight Black Nitrile	No	Faceshield, Hearing protection muffs, cryo gloves	Yes	Yes	Yes (see comment)	Yes	Yes	Lack of storage for lab coats
70-264	R. Maddalena	2/14/14			OK		Yes	Yes	Yes	No-Deteriorated gloves	Yes	
70-263	V. Srinivasan	2/14/14	Paper lab coats	Kimberly Clark Purple Nitrile; Microflex Evolution Latex			Yes	Yes	Yes (see comment)	Yes	Yes	Lack of storage for lab coats

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Personal Protective Equipment Self-Assessment

Lab Area	PI	Date	Lab Coat Type	Chemical Gloves	Visitor Safety Glasses	Other PPE Noted	Door Placard PPE OK?	All PPE Available?	PPE Properly Stored?	PPE in Good Condition?	PPE Being Worn?	Comments
70-264	R. Maddalena	2/14/14	Cloth- 65% Polyester/35% Cotton	OK			Yes	Yes	Yes	Yes	Yes	
70-269	G. Liu	2/14/14	Kleen Guard Flame Resistant Coverall	VWR Nitrile exam gloves; Diamond Grip Latex	OK		Yes	Yes	Yes (see comment)	Yes	No	Lack of storage for lab coats. Some are very soiled. Observed researchers working in hood without safety glasses or lab coat. Reported to PI
70-274	A. Andres	2/14/14	65% Dacron/35% Cotton	OK	Faceshield, cryo gloves, hearing protection ear muffs		Yes	Yes	Yes	Yes	Yes	Well organized. Safety glasses storage rack-Best Practice
70-275	L. Gundel	2/14/14	Cloth- Unknown Material	Purple Nitrile	OK		Yes	Yes	Yes	Yes	Yes	
70-289	R. Maddalena	2/14/14		VWR Purple Nitrile	No		Yes	No-Safety Glasses	Yes	Yes	Yes	Need storage box for safety glasses
70-295	V. Battaglia	2/14/14	Cloth- 65% Polyester/35% Cotton; 100% Cotton Flame Resistant (Molecular Foundry)	VWR Nitrile; Microflex Dermacare Vinyl exam gloves	OK	Chemical apron	Yes	Yes (see comment)	Yes	Yes	Yes	Lack of storage for lab coats. Some are very soiled.
62-102	M. Tucker	2/13/14	No lab coats observed	VWR Microgrip Purple Nitrile	OK	Hot Glove	Yes	Yes	Yes	Yes	Yes	Lab coats stored in office areas?
62-220	J. Kerr	2/13/14	No lab coats observed	Microflex Supreno SE Nitrile, Ansel Sol-Vex Glove on dip bucket	OK	Cryo Glove (Single, not paired), Faceshield	Yes	Missing cryo glove	Faeshield stored near chemicals-contamination	Hole in hot glove	Yes	Lab coats stored in office areas-Cloth 65% Poly/35% Cotton; Dip bucket gloves old (>penetration rate?)

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Personal Protective Equipment Self-Assessment

Lab Area	PI	Date	Lab Coat Type	Chemical Gloves	Visitor Safety Glasses	Other PPE Noted	Placard PPE OK?	All PPE Available?	PPE Properly Stored?	PPE in Good Condition?	PPE Being Worn?	Comments
62-246	J. Kerr	2/13/14	No lab coats observed		OK- Several tinted lenses		Yes	Yes	Yes	Yes	Yes	Tinted safety glasses- need to identify need for use; lab coats stored in office areas
62-308	J. Kerr	2/13/14	No lab coats observed	Microflex Supersense Nitrile, VWR Purple Nitrile	OK- Several tinted lenses		Yes	Yes	Yes	Yes	Yes	Lab coats stored in office areas
62-310	J. Kerr	2/13/14	No lab coats observed	Microflex Supersense Nitrile, VWR Purple Nitrile; Best N-Dex Dip bucket gloves	No	Hot/Cryo Gloves	Yes	No-Safety Glasses	Yes	Yes	Yes	Lab coats stored in office areas- Cloth 65% Poly/35% Cotton; Dip bucket gloves old (>penetration rate?)
62-312	G. Chen	2/13/14	No lab coats observed	VWR Purple Nitrile	OK		Yes	Yes	Yes	Yes	Yes	Lab coats stored in office areas. Cotton gloves stored on top of oven- could be misinterpreted as hot gloves.
62-314	G. Chen	2/13/14	Cloth- 80% Polyester, 20% Cotton, Paper "Kleen Guard A40"	Hign Five Nitrile, Microflex Supreno SE	OK	Hot gloves	Yes	Yes	Yes	Yes	Yes	
62-316	M. Tucker	2/13/14	Cloth 65% Polyester, 35% Cotton	Purple Nitrile	OK		Yes	Yes	Yes	Yes	Yes	
62-320	G. Chen	2/13/14	No lab coats observed	Kimberly Clark Purple Nitrile (VWR)	OK	Hot gloves	Yes	Yes	Yes	Yes	Yes	Lab coats stored in office areas
62-342	M. Doeff	2/13/14	Paper- DuPont Tyvek Disposable	n-Dex Best (Green); r-Dex Plus (Thick)	OK		Yes	Yes	Yes (see comment)	Yes	Yes	Lack of storage for lab coats

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Personal Protective Equipment Self-Assessment

Lab Area	PI	Date	Lab Coat Type	Chemical Gloves	Visitor Safety Glasses	Other PPE Noted	All PPE Available?	Door Placard PPE OK?	PPE Properly Stored?	PPE in Good Condition?	PPE Being Worn?	Comments
62-348	N. Balsara	2/13/14	Cloth- 100% Cotton	Ultrasense SE Nitrile, Microfix Supreno SE	OK		Yes	Yes	Yes	Yes	Yes	Reactive solvents
62-350	G. Chen	2/13/14	Cloth- 99% Polyester	VWR Microgrip Purple Nitrile	No		Yes	No-Safety glasses	Yes	Yes	Yes	

ATTACHMENT 3

Personal Protective Equipment On-Line Survey Form

Personal Protective Equipment (PPE) Self-Assessment

This survey is part of an EETD self-assessment project regarding personal protective equipment (PPE) use in the lab areas. Your responses will assist the self-assessment team in identifying for improvement. The deadline for receiving responses is Friday, February 21, 2014. If you have any questions about this survey, please contact the EETD Safety Manager, Ron Scholtz at X8. Your feedback is greatly appreciated!

* Required

D. 1. What types of PPE do you use on a regular basis? Check all that apply *
Check all that apply.

- Safety Glasses with Side Shields
- Face Shield
- Lab Coat
- Chemical Gloves
- Hot Gloves
- Cryogen Gloves
- Laser Glasses
- Cartridge Respirator
- Dust Mask
- Hearing Protection
- PPE is not needed in my work area
- Other: _____

D. 2. How are you informed about what types of PPE are required in your area and how to properly use it? Check all that apply *
Check all that apply.

- On-Line Safety Training
- Area Safety Lead
- Supervisor
- Principal Investigator
- Co-Worker
- Other: _____

D. 3. Who do you normally contact if you need PPE or have any questions about the PPE you are using? *
Check all that apply.

- Area Safety Lead
- Supervisor
- Principal Investigator
- Division Safety Coordinator
- EHS Division
- Other: _____

D. 4. Is required PPE made readily available to you in your work area? *
Mark only one oval.

- Yes- All PPE needed is made readily available
- Sometimes- Certain items are not always available
- No- PPE is not made readily available
- Other: _____

D. 5. How do you select the proper type of glove for chemical compatibility when working with hazardous materials? Check all that apply *
Check all that apply.

- Consult with Area Safety Lead
- Consult with Supervisor/PI
- Check the glove manufacturer compatibility chart
- I use the gloves made available in the work area
- I do not know about glove compatibility determination
- Other: _____

D. 6. Are there any airborne hazards present in your work area that you feel require the use of respiratory protection such as a cartridge respirator or dust mask? *
Mark only one oval.

- No. No respiratory protection PPE is needed.
- Yes. There is a need for respiratory protection such as respirator or dust mask. Give lab area name in "other" box below.
- Other: _____

D. 7. Are there any other types of PPE not currently in use in your work area that would be beneficial for your safety?

ATTACHMENT 4

Personal Protective Equipment Survey Results

1. What types of PPE do you use on a regular basis? Check all that apply	2. How are you informed about what types of PPE are required in your area and how to properly use it? Check all that apply	3. Who do you normally contact if you need PPE or have any questions about the PPE you are using?	4. Is required PPE made readily available to you in your work area?	5. How do you select the proper type of glove for chemical compatibility when working with hazardous materials? Check all that apply	6. Are there any airborne hazards present in your work area that you feel requires the use of respiratory protection such as a cartridge respirator or dust mask?	7. Are there any other types of PPE not currently in use in your work area that would be beneficial for your safety?	8. Do you have any other feedback or comments regarding PPE use in your work area? Do you have any needs regarding PPE that could be better addressed?
Safety Glasses with Side Shields, Chemical Gloves	On-Line Safety Training, Principal Investigator, Co-Worker	Principal Investigator	Yes- All PPE needed is made readily available	Consult with Supervisor/PI, Check the glove manufacturer compatibility chart, I use the gloves made available in the work area	No respiratory protection PPE is needed.	---	---
Safety Glasses with Side Shields, Chemical Gloves	On-Line Safety Training, Area Safety Lead, Supervisor, Principal Investigator, Co-Worker	Area Safety Lead, Supervisor, Principal Investigator	Yes- All PPE needed is made readily available	Consult with Area Safety Lead , I use the gloves made available in the work area	No respiratory protection PPE is needed.	Lab coat laundry would be nice	
Safety Glasses with Side Shields	On-Line Safety Training, Principal Investigator	Principal Investigator	Yes- All PPE needed is made readily available	I do not use gloves	No respiratory protection PPE is needed.		
Safety Glasses with Side Shields, Lab Coat, Chemical Gloves	On-Line Safety Training, Area Safety Lead, Supervisor, Principal Investigator, Co-Worker	Area Safety Lead, Supervisor, Principal Investigator, Division Safety Coordinator	Yes- All PPE needed is made readily available	Consult with Area Safety Lead , Consult with Supervisor/PI, Check the glove manufacturer compatibility chart	No respiratory protection PPE is needed.	No	No
Safety Glasses with Side Shields, Lab Coat, Chemical Gloves	On-Line Safety Training, Principal Investigator	Division Safety Coordinator	Yes- All PPE needed is made readily available	Check the glove manufacturer compatibility chart	No respiratory protection PPE is needed.	No	No

Environmental Energy Technologies Division

Personal Protective Equipment Self-Assessment

1. What types of PPE do you use on a regular basis? Check all that apply	2. How are you informed about what types of PPE are required in your area and how to properly use it? Check all that apply	3. Who do you normally contact if you need PPE or have any questions about the PPE you are using?	4. Is required PPE made readily available to you in your work area?	5. How do you select the proper type of glove for chemical compatibility when working with hazardous materials? Check all that apply	6. Are there any airborne hazards present in your work area that you feel requires the use of respiratory protection such as a cartridge respirator or dust mask?	7. Are there any other types of PPE not currently in use in your work area that would be beneficial for your safety?	8. Do you have any other feedback or comments regarding PPE use in your work area? Do you have any needs regarding PPE that could be better addressed?
			I use All PPE needed is made readily available	I use the gloves made available in the work area, I do not know about glove compatibility determination	No. No respiratory protection PPE is needed.	No. No respiratory protection PPE is needed.	No
Safety Glasses with Side Shields	On-Line Safety Training, Area Safety Lead	Area Safety Lead	Yes- All PPE needed is made readily available	Yes- All PPE needed is made readily available	Consult with Supervisor/PI, Check the glove manufacturer compatibility chart	No. No respiratory protection PPE is needed.	No
Safety Glasses with Side Shields, Face Shield, Lab Coat, Chemical Gloves, Hot Gloves, Cryogen Gloves	On-Line Safety Training, Area Supervisor, Principal Investigator, Co-Worker	Supervisor, Division Safety Coordinator, EHS Division	Yes- All PPE needed is made readily available	Yes- All PPE needed is made readily available	Consult with Area Safety Lead , Consult with Supervisor/PI, Check the glove manufacturer compatibility chart	No. No respiratory protection PPE is needed.	N/A
Safety Glasses with Side Shields, Lab Coat, Chemical Gloves	On-Line Safety Training, Area Safety Lead, Supervisor, Principal Investigator, Co-Worker	EHS Division	Yes- All PPE needed is made readily available	Yes- All PPE needed is made readily available	Consult with Area Safety Lead , Consult with Supervisor/PI, Check the glove manufacturer compatibility chart	No. No respiratory protection PPE is needed.	No
Safety Glasses with Side Shields, Lab Coat, Chemical Gloves	On-Line Safety Training, Area Safety Lead, Co-Worker	Area Safety Lead	Yes- All PPE needed is made readily available	Yes- All PPE needed is made readily available	Consult with Area Safety Lead , Check the glove manufacturer compatibility chart	No. No respiratory protection PPE is needed.	No
Safety Glasses with Side Shields, Lab Coat, Chemical Gloves	On-Line Safety Training, Area Safety Lead, Co-Worker	Campus Lab safety contact	Yes- All PPE needed is made readily available	I use the gloves made available in the work area	No. No respiratory protection PPE is needed.	No	No

Environmental Energy Technologies Division

Personal Protective Equipment Self-Assessment

1. What types of PPE do you use on a regular basis? Check all that apply	2. How are you informed about what types of PPE are required in your area and how to properly use it? Check all that apply	3. Who do you normally contact if you need PPE or have any questions about the PPE you are using?	4. Is required PPE made readily available to you in your work area?	5. How do you select the proper type of glove for chemical compatibility when working with hazardous materials? Check all that apply	6. Are there any airborne hazards present in your work area that you feel requires the use of respiratory protection such as a cartridge respirator or dust mask?	7. Are there any other types of PPE not currently in use in your work area that would be beneficial for your safety?	8. Do you have any other feedback or comments regarding PPE use in your work area? Do you have any needs regarding PPE that could be better addressed?
Safety Glasses with Side Shields, Lab Coat, Chemical Gloves, Cryogen Gloves	On-Line Safety Training, Area Safety Lead, Co-Worker	Area Safety Lead	Yes- All PPE needed is made readily available	Consult with Area Safety Lead	No. No respiratory protection PPE is needed.		
Safety glasses	On-Line Safety Training, Supervisor, Co-Worker	Supervisor, Division Safety Coordinator, EHS Division	Yes- All PPE needed is made readily available	Consult with Supervisor/PI, Check the glove manufacturer compatibility chart	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields	On-Line Safety Training	Area Safety Lead	Yes- All PPE needed is made readily available	Check the glove manufacturer compatibility chart	No. No respiratory protection PPE is needed.		
PPE is not needed in my work area	On-Line Safety Training, Supervisor, Principal Investigator, Co-Worker	Supervisor	Yes- All PPE needed is made readily available	Consult with Supervisor/PI	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields, Face Shield, Lab Coat, Chemical Gloves, Hot Gloves, Cryogen Gloves	On-Line Safety Training, Area Safety Supervisor	Area Safety Lead	Yes- All PPE needed is made readily available	Check the glove manufacturer compatibility chart	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields, Chemical Gloves	Area Safety Lead	Area Safety Lead	Yes- All PPE needed is made readily available	Consult with Area Safety Lead	No. No respiratory protection PPE is needed.		

Environmental Energy Technologies Division

Personal Protective Equipment Self-Assessment

1. What types of PPE do you use on a regular basis? Check all that apply	2. How are you informed about what types of PPE are required in your area and how to properly use it? Check all that apply	3. Who do you normally contact if you need PPE or have any questions about the PPE you are using?	4. Is required PPE made readily available to you in your work area?	5. How do you select the proper type of glove for chemical compatibility when working with hazardous materials? Check all that apply	6. Are there any airborne hazards present in your work area that you feel requires the use of respiratory protection such as a cartridge respirator or dust mask?	7. Are there any other types of PPE not currently in use in your work area that would be beneficial for your safety?	8. Do you have any other feedback or comments regarding PPE use in your work area? Do you have any needs regarding PPE that could be better addressed?
Safety Glasses with Side Shields, Face Shield, Lab Coat, Chemical Gloves, Hot Gloves, Cryogen Gloves	On-Line Safety Training, Area Safety Lead, Supervisor	Area Safety Lead, Supervisor	Yes- All PPE needed is made readily available	Check the glove manufacturer compatibility chart	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields, Lab Coat, Chemical Gloves, Hot Gloves	On-Line Safety Training, Area Safety Lead	Area Safety Lead, Division Safety Coordinator	Yes- All PPE needed is made readily available	Consult with Area Safety Lead , Consult with Supervisor/P	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields, Lab Coat, Chemical Gloves, Hot Gloves	On-Line Safety Training, Supervisor, Principal Investigator, Pub3000	Supervisor, Principal Investigator, Division Safety Coordinator, EHS Division	Yes- All PPE needed is made readily available	Consult with Supervisor/PI, Check the glove manufacturer compatibility chart, Pub3000	No. No respiratory protection PPE is needed.		N/A
Safety Glasses with Side Shields, Lab Coat, Chemical Gloves	On-Line Safety Training	Division Safety Coordinator	Yes- All PPE needed is made readily available	Check the glove manufacturer compatibility chart	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields	On-Line Safety Training, Area Safety Lead, Supervisor, Co-Worker	Area Safety Lead, Supervisor, Division Safety Coordinator	Yes- All PPE needed is made readily available	I do not know about glove compatibility determination	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields, Lab Coat	On-Line Safety Training, Area Safety Lead, Supervisor, Principal Investigator	Supervisor, Principal Investigator	Yes- All PPE needed is made readily available	Check the glove manufacturer compatibility chart	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields, Chemical Gloves	On-Line Safety Training	Principal Investigator	Sometimes- Certain items are not always available	I use the gloves made available in the work area	No. No respiratory protection PPE is needed.		

Environmental Energy Technologies Division

Personal Protective Equipment Self-Assessment

1. What types of PPE do you use on a regular basis? Check all that apply	2. How are you informed about what types of PPE are required in your area and how to properly use it? Check all that apply	3. Who do you normally contact if you need PPE or have any questions about the PPE you are using?	4. Is required PPE made readily available to you in your work area?	5. How do you select the proper type of glove for chemical compatibility when working with hazardous materials? Check all that apply	6. Are there any airborne hazards present in your work area that you feel requires the use of respiratory protection such as a cartridge respirator or dust mask?	7. Are there any other types of PPE not currently in use in your work area that would be beneficial for your safety?	8. Do you have any other feedback or comments regarding PPE use in your work area? Do you have any needs regarding PPE that could be better addressed?
PPE is not needed in my work area	On-Line Safety Training, Supervisor, Co-Worker	Supervisor	Yes- All PPE needed is made readily available	I don't work with hazardous materials	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields	On-Line Safety Training, Area Safety Lead, Co-Worker	Area Safety Lead, EHS Division	Yes- All PPE needed is made readily available	I use the gloves made available in the work area	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields, Lab Coat, Chemical Gloves	On-Line Safety Training, Area Safety Lead, Supervisor, Principal Investigator, Co-Worker	VWR	Yes- All PPE needed is made readily available	Check the glove manufacturer compatibility chart	No. No respiratory protection PPE is needed.	no	no
Safety Glasses with Side Shields	On-Line Safety Training	Division Safety Coordinator	Yes- All PPE needed is made readily available	Check the glove manufacturer compatibility chart	No. No respiratory protection PPE is needed.	na	
PPE is not needed in my work area	NA	Supervisor	Yes- All PPE needed is made readily available	Consult with Supervisor/P ₁ , Check the glove manufacturer compatibility chart	No. No respiratory protection PPE is needed.	no	no
Safety Glasses with Side Shields, Face Shield, Lab Coat, Chemical Gloves, Hot Gloves, Cryogen Gloves, gloves with cut protection	On-Line Safety Training, Supervisor, Co-Worker, MSDS Supervisor, Principal Investigator, Co-Worker	EHS Division	Yes- All PPE needed is made readily available	Consult with Supervisor/P ₁ , Check the glove manufacturer compatibility chart	I have a respirator for catalyst work in 70-105	I should probably have safety shoes when moving gas cylinders.	No
Safety Glasses with Side Shields, Lab Coat, Chemical Gloves	On-Line Safety Training, Area Safety Lead, Supervisor, Principal Investigator, Co-Worker	Area Safety Lead, Supervisor, Principal Investigator	Yes- All PPE needed is made readily available	Consult with Supervisor/P ₁ , Check the glove manufacturer compatibility chart	No. No respiratory protection PPE is needed.	No	No

Environmental Energy Technologies Division

Personal Protective Equipment Self-Assessment

1. What types of PPE do you use on a regular basis? Check all that apply	2. How are you informed about what types of PPE are required in your area and how to properly use it? Check all that apply	3. Who do you normally contact if you need PPE or have any questions about the PPE you are using?	4. Is required PPE made readily available to you in your work area?	5. How do you select the proper type of glove for chemical compatibility when working with hazardous materials? Check all that apply	6. Are there any airborne hazards present in your work area that you feel requires the use of respiratory protection such as a cartridge respirator or dust mask?	7. Are there any other types of PPE not currently in use in your work area that would be beneficial for your safety?	8. Do you have any other feedback or comments regarding PPE use in your work area? Do you have any needs regarding PPE that could be better addressed?
Safety Glasses with Side Shields, Lab Coat, Chemical Gloves	On-Line Safety Training	Area Safety Lead	Yes- All PPE needed is made readily available	Consult with Area Safety Lead	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields, Lab Coat, Chemical Gloves	On-Line Safety Training, Area Safety Lead, Supervisor	Area Safety Lead, Supervisor	Yes- All PPE needed is made readily available	Consult with Area Safety Lead , Check the glove manufacturer compatibility chart	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields, Lab Coat, Chemical Gloves	On-Line Safety Training, Supervisor, Co-Worker	Supervisor	Yes- All PPE needed is made readily available	Check the glove manufacturer compatibility chart, I use the gloves made available in the work area	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields, Face Shield, Lab Coat, Cryogen Gloves	On-Line Safety Training, Co-Worker	Area Safety Lead	Yes- All PPE needed is made readily available	Check the glove manufacturer compatibility chart	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields, Face Shield, Chemical Gloves	On-Line Safety Training, Area Safety Lead, Supervisor, Principal Investigator, Co-Worker	Supervisor, Principal Investigator	Yes- All PPE needed is made readily available	Consult with Area Safety Lead , Consult with Supervisor/PI	No. No respiratory protection PPE is needed.		

Environmental Energy Technologies Division

Personal Protective Equipment Self-Assessment

1. What types of PPE do you use on a regular basis? Check all that apply	2. How are you informed about what types of PPE are required in your area and how to properly use it? Check all that apply	3. Who do you normally contact if you need PPE or have any questions about the PPE you are using?	4. Is required PPE made readily available to you in your work area?	5. How do you select the proper type of glove for chemical compatibility when working with hazardous materials? Check all that apply	6. Are there any airborne hazards present in your work area that you feel requires the use of respiratory protection such as a cartridge respirator or dust mask?	7. Are there any other types of PPE not currently in use in your work area that would be beneficial for your safety?	8. Do you have any other feedback or comments regarding PPE use in your work area? Do you have any needs regarding PPE that could be better addressed?
Safety Glasses with Side Shields, Lab Coat, Chemical Gloves, Laser Glasses	On-Line Safety Training, Area Safety Lead, Supervisor, Principal Investigator, Division Safety Coordinator, EHS Division	Area Safety Lead, Supervisor, Principal Investigator, Division Safety Coordinator, EHS Division	Yes- All PPE needed is made readily available	Consult with Area Safety Lead , Consult with Supervisor/PI, Check the glove manufacturer compatibility chart	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields, Lab Coat, Chemical Gloves	On-Line Safety Training, Principal Investigator, Co-Worker	Area Safety Lead, Principal Investigator	Yes- All PPE needed is made readily available	Check the glove manufacturer compatibility chart	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields, Lab Coat, Chemical Gloves	On-Line Safety Training, Principal Investigator, Co-Worker	Principal Investigator	Yes- All PPE needed is made readily available	Check the glove manufacturer compatibility chart, I use the gloves made available in the work area	No. No respiratory protection PPE is needed.		No
Safety Glasses with Side Shields, Face Shield, Lab Coat, Chemical Gloves, Hot Gloves, Cryogen Gloves	On-Line Safety Training, Co-Worker, knowledge from previous position	Division Safety Coordinator, EHS Division	I am responsible for making PPE available in my areas	Check the glove manufacturer compatibility chart, knowledge from previous position	No. No respiratory protection PPE is needed.	cut resistant gloves for washing glassware, ergo controls for analytical equipment	none
Safety Glasses with Side Shields, Lab Coat, Chemical Gloves, Laser Glasses	On-Line Safety Training, Supervisor	Supervisor, Division Safety Coordinator, EHS Division	Sometimes-Certain items are not always available	Consult with Supervisor/PI	No. No respiratory protection PPE is needed.		None

Environmental Energy Technologies Division

Personal Protective Equipment Self-Assessment

1. What types of PPE do you use on a regular basis? Check all that apply	2. How are you informed about what types of PPE are required in your area and how to properly use it? Check all that apply	3. Who do you normally contact if you need PPE or have any questions about the PPE you are using?	4. Is required PPE made readily available to you in your work area?	5. How do you select the proper type of glove for chemical compatibility when working with hazardous materials? Check all that apply	6. Are there any airborne hazards present in your work area that you feel requires the use of respiratory protection such as a cartridge respirator or dust mask?	7. Are there any other types of PPE not currently in use in your work area that would be beneficial for your safety?	8. Do you have any other feedback or comments regarding PPE use in your work area? Do you have any needs regarding PPE that could be better addressed?
			On-Line Safety Training, Area Safety Lead, Supervisor, Principal Investigator, Co-Worker	Division Safety Coordinator	Yes- All PPE needed is made readily available	Check the glove manufacturer compatibility chart Yes. There is a need for respiratory protection such as respirator or dust mask. Give lab area name in "other" box below.	
Safety Glasses with Side Shields, Lab Coat, Chemical Gloves, Cartridge Respirator		Principal Investigator, Division Safety Coordinator, EHS Division	Yes- All PPE needed is made readily available	Consult with Supervisor/PI, Check the glove manufacturer compatibility chart, I use the gloves made available in the work area	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields, Face Shield, Lab Coat, Chemical Gloves, Hot Gloves, Cryogen Gloves		On-Line Safety Training, Principal Investigator	Yes- All PPE needed is made readily available	Check the glove manufacturer compatibility chart No. No respiratory protection PPE is needed.			
Safety Glasses with Side Shields, Face Shield, Lab Coat, Chemical Gloves, Hot Gloves		Supervisor, Principal Investigator, Division Safety Coordinator	Yes- All PPE needed is made readily available	Check the glove manufacturer compatibility chart, I use the gloves made available in the work area	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields, Face Shield, Lab Coat, Chemical Gloves, Hot Gloves, Cryogen Gloves		On-Line Safety Training, Area Safety Lead, Supervisor	Yes- All PPE needed is made readily available	Check the glove manufacturer compatibility chart, I use the gloves made available in the work area	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields, Face Shield, Lab Coat, Chemical Gloves, Hearing Protection		Area Safety Lead, Division Safety Coordinator	Yes- All PPE needed is made readily available	Consult with Area Safety Lead , I use the gloves made available in the work area	No. No respiratory protection PPE is needed.		

Environmental Energy Technologies Division

Personal Protective Equipment Self-Assessment

1. What types of PPE do you use on a regular basis? Check all that apply	2. How are you informed about what types of PPE are required in your area and how to properly use it? Check all that apply	3. Who do you normally contact if you need PPE or have any questions about the PPE you are using?	4. Is required PPE made readily available to you in your work area?	5. How do you select the proper type of glove for chemical compatibility when working with hazardous materials? Check all that apply	6. Are there any airborne hazards present in your work area that you feel requires the use of respiratory protection such as a cartridge respirator or dust mask?	7. Are there any other types of PPE not currently in use in your work area that would be beneficial for your safety?	8. Do you have any other feedback or comments regarding PPE use in your work area? Do you have any needs regarding PPE that could be better addressed?
Safety Glasses with Side Shields, Face Shield, Chemical Gloves, Cryogen Gloves, Cartridge Respirator	On-Line Safety Training, good practices, common sense	EHS Division, EH&S area experts	Yes- All PPE needed is made readily available	Check the glove manufacturer compatibility chart	Yes. There is a need for respiratory protection such as respirator or dust mask. Give lab area name in "other" box below.	no	no
Safety Glasses with Side Shields, Lab Coat, Chemical Gloves	On-Line Safety Training	Area Safety Lead	Yes- All PPE needed is made readily available	I use the gloves made available in the work area	No. No respiratory protection PPE is needed.	No	No
Safety Glasses with Side Shields, Low Voltage Gloves	On-Line Safety Training	Division Safety Coordinator	Yes- All PPE needed is made readily available	Check the glove manufacturer compatibility chart	No. No respiratory protection PPE is needed.	No	No
Safety Glasses with Side Shields, Lab Coat, Chemical Gloves	Supervisor	Supervisor	Yes- All PPE needed is made readily available	Consult with Supervisor/PI	No. No respiratory protection PPE is needed.	no	no
Safety Glasses with Side Shields, Chemical Gloves, Cryogen Gloves	On-Line Safety Training, Area Safety Lead, Supervisor	Area Safety Lead, Supervisor	Yes- All PPE needed is made readily available	Consult with Area Safety Lead , Consult with Supervisor/PI, Check the glove manufacturer compatibility chart	No. No respiratory protection PPE is needed.	No	No.
Safety Glasses with Side Shields, Chemical Gloves	On-Line Safety Training, Supervisor, Co-Worker	Supervisor, Division Safety Coordinator	Yes- All PPE needed is made readily available	I use the gloves made available in the work area	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields	Area Safety Lead	Area Safety Lead	Yes- All PPE needed is made readily available	na	No. No respiratory protection PPE is needed.		

Environmental Energy Technologies Division

Personal Protective Equipment Self-Assessment

1. What types of PPE do you use on a regular basis? Check all that apply	2. How are you informed about what types of PPE are required in your area and how to properly use it? Check all that apply	3. Who do you normally contact if you need PPE or have any questions about the PPE you are using?	4. Is required PPE made readily available to you in your work area?	5. How do you select the proper type of glove for chemical compatibility when working with hazardous materials? Check all that apply	6. Are there any airborne hazards present in your work area that you feel requires the use of respiratory protection such as a cartridge respirator or dust mask?	7. Are there any other types of PPE not currently in use in your work area that would be beneficial for your safety?	8. Do you have any other feedback or comments regarding PPE use in your work area? Do you have any needs regarding PPE that could be better addressed?
			Yes- All PPE needed is made readily available	Check the glove manufacturer compatibility chart, Am fully aware of appropriate use	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields, Lab Coat, Chemical Gloves	On-Line Safety Training	Area Safety Lead, Division Safety Coordinator	Yes- All PPE needed is made readily available	Consult with Area Safety Lead , Consult with Supervisor/P!, Check the glove manufacturer compatibility chart	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields, Lab Coat, Chemical Gloves	On-Line Safety Training, Area Safety Lead, Supervisor, Principal Investigator, Co-Worker	Area Safety Lead, Supervisor, Principal Investigator, Division Safety Coordinator, EHS Division	Yes- All PPE needed is made readily available	Consult with Area Safety Lead , Consult with Supervisor/P!, Check the glove manufacturer compatibility chart	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields, Lab Coat, Chemical Gloves	On-Line Safety Training, Area Safety Lead, Supervisor, Principal Investigator, Co-Worker	Supervisor, Principal Investigator, co-worker	Yes- All PPE needed is made readily available	Consult with Supervisor/P!, Check the glove manufacturer compatibility chart	No. No respiratory protection PPE is needed.	No. We have enough.	No. They are good for now.
Safety Glasses with Side Shields, Lab Coat, Chemical Gloves	On-Line Safety Training, Area Safety Lead, Supervisor, Principal Investigator, Co-Worker	Supervisor, Principal Investigator	Yes- All PPE needed is made readily available	Consult with Supervisor/P!, I use the gloves made available in the work area	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields, Lab Coat, Chemical Gloves	On-Line Safety Training, Supervisor, Principal Investigator, Co-Worker	Supervisor	Yes- All PPE needed is made readily available	Consult with Supervisor/P!, Check the glove manufacturer compatibility chart	No. No respiratory protection PPE is needed.		

Environmental Energy Technologies Division

Personal Protective Equipment Self-Assessment

1. What types of PPE do you use on a regular basis? Check all that apply	2. How are you informed about what types of PPE are required in your area and how to properly use it? Check all that apply	3. Who do you normally contact if you need PPE or have any questions about the PPE you are using?	4. Is required PPE made readily available to you in your work area?	5. How do you select the proper type of glove for chemical compatibility when working with hazardous materials? Check all that apply	6. Are there any airborne hazards present in your work area that you feel requires the use of respiratory protection such as a cartridge respirator or dust mask?	7. Are there any other types of PPE not currently in use in your work area that would be beneficial for your safety?	8. Do you have any other feedback or comments regarding PPE use in your work area? Do you have any needs regarding PPE that could be better addressed?
Safety Glasses with Side Shields, Lab Coat, Chemical Gloves, Hearing Protection	On-Line Safety Training, Area Safety Lead, Supervisor, Principal Investigator, Co-Worker	Supervisor, Principal Investigator	Yes- All PPE needed is made readily available	Consult with Supervisor/P/I, Check the glove manufacturer compatibility chart	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields, Lab Coat, Chemical Gloves	On-Line Safety Training, Principal Investigator, Co-Worker	Principal Investigator, EHS Division	Yes- All PPE needed is made readily available	Consult with Supervisor/P/I, Check the glove manufacturer compatibility chart	Yes. There is a need for respiratory protection such as respirator or dust mask. Give lab area name in "other" box below.		We use dust mask when we have to change the activated carbon used in our glove boxes
Safety Glasses with Side Shields, PPE is not needed in my work area	On-Line Safety Training, Area Safety Lead	Area Safety Lead, Division Safety Coordinator	Yes- All PPE needed is made readily available	don't work with chemicals	No. No respiratory protection PPE is needed.	None that I know of	
Safety Glasses with Side Shields, Lab Coat	On-Line Safety Training, Supervisor, Co-Worker	Supervisor	Yes- All PPE needed is made readily available	Consult with Supervisor/P/I	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields	On-Line Safety Training	Division Safety Coordinator	Yes- All PPE needed is made readily available	Consult with Area Safety Lead , Consult with Supervisor/P/I	No. No respiratory protection PPE is needed.		
PPE is not needed in my work area	On-Line Safety Training, Area Safety Lead	Division Safety Coordinator	Yes- All PPE needed is made readily available	Not Applicable - do not know	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields, Chemical Gloves	Principal Investigator	Principal Investigator	Yes- All PPE needed is made readily available	I use the gloves made available in the work area	No. No respiratory protection PPE is needed.	none needed	no

Environmental Energy Technologies Division

Personal Protective Equipment Self-Assessment

1. What types of PPE do you use on a regular basis? Check all that apply	2. How are you informed about what types of PPE are required in your area and how to properly use it? Check all that apply	3. Who do you normally contact if you need PPE or have any questions about the PPE you are using?	4. Is required PPE made readily available to you in your work area?	5. How do you select the proper type of glove for chemical compatibility when working with hazardous materials? Check all that apply	6. Are there any airborne hazards present in your work area that you feel requires the use of respiratory protection such as a cartridge respirator or dust mask?	7. Are there any other types of PPE not currently in use in your work area that would be beneficial for your safety?	8. Do you have any other feedback or comments regarding PPE use in your work area? Do you have any needs regarding PPE that could be better addressed?
Face Shield, Lab Coat, Chemical Gloves, Cryogen Gloves, Laser Glasses	On-Line Safety Training, Area Safety Lead, Supervisor, Principal Investigator, Co-Worker	Supervisor, Principal Investigator, Division Safety Coordinator	Yes- All PPE needed is made readily available	Consult with Supervisor/PI, Check the glove manufacturer compatibility chart	No. No respiratory protection PPE is needed.		
PPE is not needed in my work area	On-Line Safety Training	Area Safety Lead	Yes- All PPE needed is made readily available	Check the glove manufacturer compatibility chart	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields	On-Line Safety Training, Area Safety Lead, Supervisor, Principal Investigator, Co-Worker	Area Safety Lead, Supervisor	Yes- All PPE needed is made readily available	Consult with Area Safety Lead , Consult with Supervisor/PI	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields, Lab Coat, Chemical Gloves, Cryogen Gloves	On-Line Safety Training, Supervisor	Supervisor	Yes- All PPE needed is made readily available	Consult with Supervisor/PI	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields, Lab Coat, Chemical Gloves, Cryogen Gloves	On-Line Safety Training, Area Safety Lead, Co-Worker	Area Safety Lead, Division Safety Coordinator	Yes- All PPE needed is made readily available	Consult with Area Safety Lead , Check the glove manufacturer compatibility chart	No. No respiratory protection PPE is needed.		

Environmental Energy Technologies Division

Personal Protective Equipment Self-Assessment

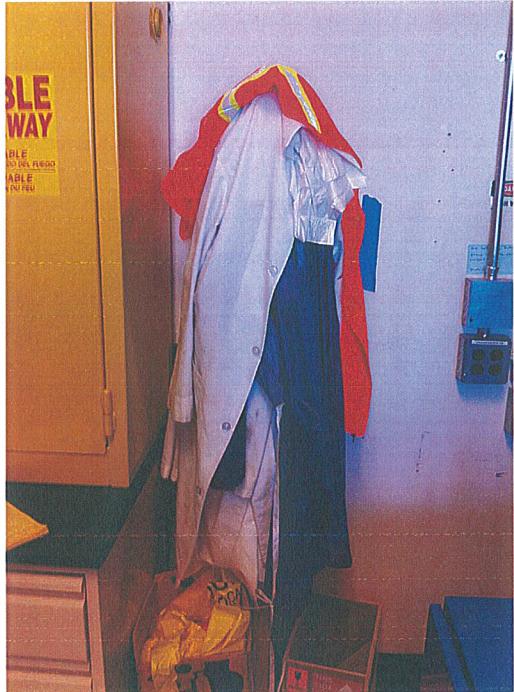
1. What types of PPE do you use on a regular basis? Check all that apply	2. How are you informed about what types of PPE are required in your area and how to properly use it? Check all that apply	3. Who do you normally contact if you need PPE or have any questions about the PPE you are using?	4. Is required PPE made readily available to you in your work area?	5. How do you select the proper type of glove for chemical compatibility when working with hazardous materials? Check all that apply	6. Are there any airborne hazards present in your work area that you feel requires the use of respiratory protection such as a cartridge respirator or dust mask?	7. Are there any other types of PPE not currently in use in your work area that would be beneficial for your safety?	8. Do you have any other feedback or comments regarding PPE use in your work area? Do you have any needs regarding PPE that could be better addressed?
Safety Glasses with Side Shields, Face Shield, Lab Coat, Chemical Gloves, Hot Gloves, Cryogen Gloves, Cartridge Respirator, Dust Mask, Hearing Protection	On-Line Safety Training, Supervisor, Co-Worker	Supervisor, Principal Investigator, Division Safety Coordinator, EHS Division	Yes- All PPE needed is made readily available	Consult with Area Safety Lead , Consult with Supervisor/PI, Check the glove manufacturer compatibility chart, I use the gloves made available in the work area	No No respiratory protection PPE is needed.	No	No
Safety Glasses with Side Shields, Lab Coat, Chemical Gloves, Hot Gloves	On-Line Safety Training, campus EHS	Division Safety Coordinator, EHS Division	Just starting work	Check the glove manufacturer compatibility chart	No. No respiratory protection PPE is needed.	NA	Will always make any necessary PPE available to my students/post-docs
PPE is not needed in my work area	Supervisor	Supervisor	No- PPE is not made readily available	I use the gloves made available in the work area	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields, Lab Coat, Chemical Gloves	Living in EH&S	Division Safety Coordinator, EHS Division	Yes- All PPE needed is made readily available	Check the glove manufacturer compatibility chart, EHS and Safety Coordinator	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields, PPE is not needed in my work area	On-Line Safety Training, Supervisor	Area Safety Lead, Supervisor, Division Safety Coordinator	Yes- All PPE needed is made readily available	Consult with Area Safety Lead , Consult with Supervisor/PI, Check the glove manufacturer compatibility chart	No. No respiratory protection PPE is needed.		

Environmental Energy Technologies Division

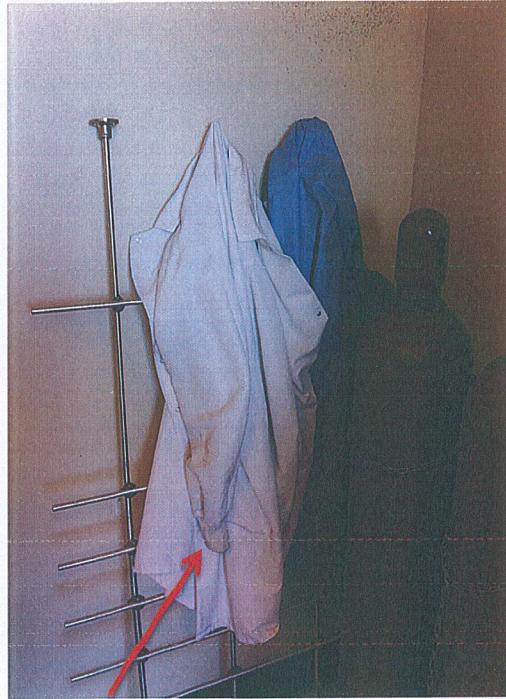
Personal Protective Equipment Self-Assessment

1. What types of PPE do you use on a regular basis? Check all that apply	2. How are you informed about what types of PPE are required in your area and how to properly use it? Check all that apply	3. Who do you normally contact if you need PPE or have any questions about the PPE you are using?	4. Is required PPE made readily available to you in your work area?	5. How do you select the proper type of glove for chemical compatibility when working with hazardous materials? Check all that apply	6. Are there any airborne hazards present in your work area that you feel requires the use of respiratory protection such as a cartridge respirator or dust mask?	7. Are there any other types of PPE not currently in use in your work area that would be beneficial for your safety?	8. Do you have any other feedback or comments regarding PPE use in your work area? Do you have any needs regarding PPE that could be better addressed?
Safety Glasses with Side Shields, Chemical Gloves, Hearing Protection	On-Line Safety Training, Area Safety Lead, Supervisor	Area Safety Lead, Supervisor, Principal Investigator	Sometimes-Certain items are not always available	Consult with Area Safety Lead , Consult with Supervisor/PI, Check the glove manufacturer compatibility chart	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields, Face Shield, Lab Coat, Chemical Gloves, Laser Glasses	On-Line Safety Training, Area Safety Lead, Supervisor, Co-Worker	Area Safety Lead, Supervisor, Division Safety Coordinator, EHS Division	Sometimes-Certain items are not always available	Consult with Area Safety Lead , Consult with Supervisor/PI, Check the glove manufacturer compatibility chart, I use the gloves made available in the work area	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields, Lab Coat, Chemical Gloves	On-Line Safety Training, Supervisor	Supervisor	Yes-All PPE needed is made readily available	Consult with Supervisor/PI, I use the gloves made available in the work area	No. No respiratory protection PPE is needed.		
Safety Glasses with Side Shields, PPE is not needed in my work area	On-Line Safety Training, Supervisor, Principal Investigator	Supervisor	Yes- All PPE needed is made readily available	Consult with Supervisor/PI, Check the glove manufacturer compatibility chart	No. No respiratory protection PPE is needed.		

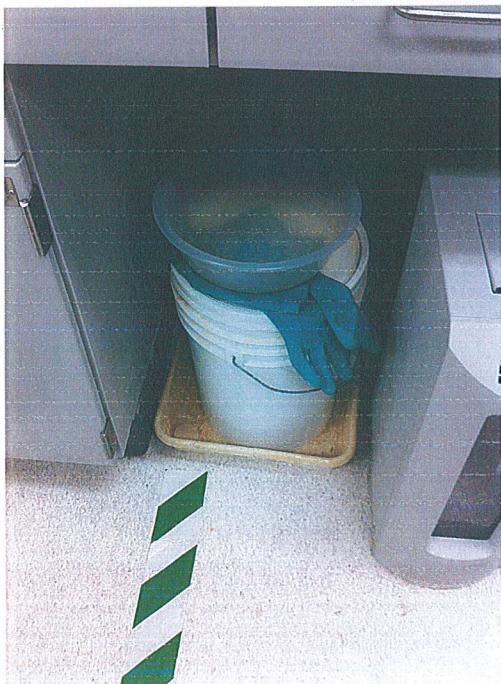
ATTACHMENT 5
Self Assessment Photographs



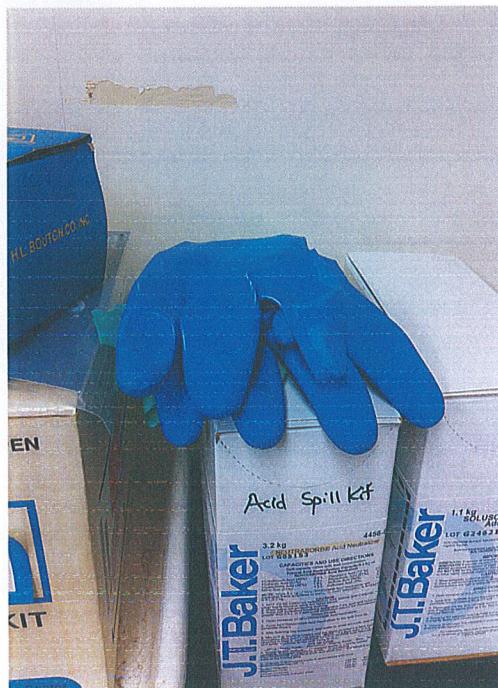
Poor Lab Coat Storage



Poor Condition Lab Coat



Improper Storage of Gloves



Damaged Gloves

ATTACHMENT 6

Lab Coat Safety Alert

Environmental Energy Technologies Division

SAFETY ALERT

March 11, 2014

PERSONAL PROTECTIVE EQUIPMENT- LAB COATS

Lab coats are used to cover your regular clothes and minimize chemical contamination and splash hazards while working in the lab areas. They can also provide some temporary protection against fire depending on the type of material the lab coat is made of. Lab coats are not designed to be impermeable to chemicals, but they can provide additional safety since they can be quickly removed to isolate harmful exposures. Lab coat requirements for LBNL are found in the Chemical Hygiene and Safety Plan under general personal protective equipment requirements: <http://www.lbl.gov/ehs/chsp/html/materials.shtml#PPE>.

It is your responsibility to wear proper personal protective equipment when required. This includes the use of lab coats when handling hazardous materials. Here are some things to keep in mind regarding lab coat use:

- Wear a lab coat when hazards to the body are likely to be present. A good rule of thumb is to wear a lab coat at all times when working in a wet lab area.
- Lab coats made of cotton fabric are recommended for general lab use without fire hazards. Flame resistant fabric (NOMEX®) is required when handling pyrophoric materials outside of a fume hood. Flame retardant cotton fabric is highly recommended when handling flammable solvents or reactive metals. Don't wear lab coats made of synthetic fabrics such as polyester if there is a potential for fire. Synthetic fabrics burn, melt, and stick to skin!
- Wear lab coats completely buttoned up. An open lab coat does not provide protection from hazardous exposures. Don't roll up sleeves for comfort or ventilation.
- Don't wear or store lab coats in non-laboratory areas such as offices or break areas. This can result in the spread of any residual contamination from the lab coat.
- Keep lab coats clean. If they become contaminated or dirty, they should either be disposed or sent out for cleaning by a professional linen service. Do not take contaminated lab coats home for cleaning.
- Lab coats should be properly stored on a designated hanger in the lab area. Clearly identify the lab coat user to avoid mixing them up. Don't let dirty lab coats pile up on coat racks making cross contamination possible. See your Area Safety Lead if you need a lab coat.
- Use of a chemical apron when there is a chance of exposure to corrosive materials.

Please contact the EETD Safety Manager, Ron Scholtz X8137 if you have any questions about lab coat requirements.

Lab Coat Material	Features
<i>Polyester/Cotton Blend</i>	Splash protection, but no specific chemical resistance. May provide better protection against corrosive materials than does cotton. Burns readily when ignited and are not appropriate for use with flammable liquids, reactive metals, pyrophoric materials, or near open flame.
<i>100% Cotton</i>	No specific chemical resistance, but may provide better protection from solvent contamination than corrosives contamination. No flame resistance but burns less readily than polyester blends.
<i>100% Cotton with Flame Retardant</i>	No specific chemical resistance, but may provide better protection from solvent contamination than corrosives contamination. Appropriate for use in laboratories where there is fire risk from flammable material handling, reactive metals or open flame.
<i>NOMEX®</i>	NOMEX® is essentially unaffected by most solvents, and is resistant to attacks by acids and alkalis. Appropriate for use where there is extreme danger from open flame, electric arc flash, and pyrophoric materials.



Cotton



NOMEX®